

ABSTRACT

The hydrogravity separation of a multiple domain solid feedstock comprises granulating the feedstock to produce particles substantially of individual domain components having different densities. A dispersion mixer having a high shear and/or turbulent zone is utilized to disperse agglomerated particles and a quiescent hydrogravity tank is utilized to effect binary separation of one or more of the heaviest or one or more of the lightest feedstock components by utilizing an aqueous solution having a specific gravity intermediate of the various components. A high degree of purity is obtained by feeding particles of a selected component to a plurality of sequential dispersion mixers and hydrogravity separation tanks. In a similar manner, remaining thermoplastic particle components can be selectively removed and purified.